

## Course Outcomes Guide (COG)

**Course Title:** Bio113 FA15

**Date:** 6/3/16

**Course Team:** Nickerson

### Expected Learning Outcomes

- Students will access, process, analyze and synthesize scientific information.
- Students will apply knowledge of specific course content to understand personal and societal scientific issues.
- Students will apply the scientific method and use critical thinking skills in order to generate, graph, analyze and interpret scientific data and reports.
- Students will apply computer and information literacy skills in the preparation of lab reports and written assignments.
- Students will communicate biological concepts through writing and/or presentations.
- Students will apply computer and information literacy skills in the preparation of lab reports.

### Assessment

- 3 multiple choice / short answer exams (100 pts each)
- 1 cumulative final exam (100 pts)
- 15 lecture homework assignments (P/F, 10 pts each)
- 10 online lecture quizzes (high ten, worth 10 points each)
- 10 lab quizzes/assignments (20 pts each)

### Validation

Online homework assignments and quizzes are assessed automatically by educational software designed by the publisher of the course textbook. Each assessment item is linked to a specific learning objective and ranked by difficulty level 1-5.

All assignments that are not automatically graded are assessed for correct information using a common rubric.

The Common Final Exam has been developed in house by the instructor. The scores on the Common Final exam correlate with course grades.

## Results

|  |      |   |
|--|------|---|
| Bio113-01 F15<br>Nickerson   |      |   |
| Number of students in section  | 23   |   |
| Number of students completing Common<br>Final Exam<br>(graded scantrons) | 23   |   |
| % Withdrawn  | 0    |   |
| % Walk-away F  | 0    |   |
| % Student success  | 95.6 |   |
| Average % score<br>Common Final Exam                                     | 78.9 |   |
| Average % score Critical Thinking / Gen. Ed.<br>Skills                   | 85   |   |
| Average Course Grade   | 83.6 |   |
| Course Grade Distribution (%)  | 8    | A |
|  | 8    | B |
|  | 6    | C |
|  | 0    | D |
|  | 1    | F |
|  | 0    | W |

## Follow-up

In Fall of 2016 Bio113 will merge with Bio101, which has been eliminated. Bio113 FA15 was taught at the level of an honors course since the student population included biology majors who were simultaneously enrolled in CHM 101/013. The students were highly motivated and competitive. Bio113 FA16 will be tailored to a more general student population some of who will not be biology majors and will not require a chemistry pre-requisite. This change will necessitate a different emphasis on course content. Instructional methods will shift to actively engage students in their learning process. Several 'flipped classroom' methods will be practiced. To motivate

## Budget Justification

Students rely heavily on Student Learning Center and Testing Center services for:

- access to course materials, physical and online
- printing of course handouts and notes
- private tutoring
- group study
- learning assessment

